

## REMARKS

The Office Action of May 6, 2009 was received and carefully reviewed. Claims 1-17 and 21-45 were pending prior to the instant amendment. By this amendment, claims 1-2, 11-12 and 15-16 are amended; claims 46-51 are added. Consequently, claims 1-17 and 21-45 are currently pending in the instant application, of which, claims 3-9, 13-14, 23-24, 27-28, 33-34, 39 and 42-43 are withdrawn. Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Claims 1-2, 11-12, 15-16, 21-22, 25-26, 29-32, 35-38, 40-41 and 44-45 were rejected under 35 U.S.C. §103(a) as being unpatentable over Takafuji '578 in view of Takenaka '676. Claims 10 and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Takafuji/Takanaka in view of Nakayama '338. Takafuji, Takenaka and Nakayama, however, fail to render the claimed invention unpatentable. Each of the claims recite a specific combination of features that distinguishes the invention from the prior art in different ways. For example, independent claim 1 has been amended to recite a combination that includes, among other things:

*“. . . wherein each of the first width and the second width of the third region is a length in a direction perpendicular to a carrier flow direction, and the direction of the first width and the direction of the second width are the same . . . wherein the convexed or concaved portion becomes an origin of crystal growth . . .”*

Independent claims 2, 11-12, and 15-16 recite similarly claimed features. In contrast, on page 5 of the outstanding Office Action, the Examiner asserts that the second width is indicated by the dotted lines in FIG. 9C of Takafuji. Upon further review of FIG. 9C, the direction of the first width and the direction of the second width are, indeed, not the same, as recited in the present claims. Applicant further notes that none of the applied secondary references discloses or fairly suggests the missing elements of Takafuji.

In addition, the pending independent claims recite that the convexed or concaved portion becomes an origin of crystal growth (support for which is found, at least, on page 6, lines 10-11, of the originally filed specification) wherein the number of grain boundaries crossing the channel forming region in a width direction of the channel forming region is zero. Thus, the convexed or concaved portion of the present invention has advantages for forming the channel forming region having a zero grain boundary. On the other hand, it Takafuji fails to disclose and is not intended to form the recited convexed or concaved portion for making it become an origin of crystal growth. Again, none of the applied secondary references discloses or fairly suggests the aforementioned missing elements of Takafuji. Accordingly, at the very least, the applied references, whether taken alone or in combination, fail to disclose or suggest any of these exemplary features recited in independent claims 1, 2, 11-12, and 15-16.

In accordance with the M.P.E.P. § 2143.03, to establish a *prima facie* case of obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 409 F.2d 981, 180 USPQ 580 (CCPA 1974). “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 196 (CCPA 1970). Therefore, it is respectfully submitted that neither Takafuji, Takenaka nor Nakayama, taken alone or in any proper combination, discloses or suggests the subject matter as recited in claims 1, 2, 11-12, and 15-16. Hence, withdrawal of the rejection is respectfully requested.

Each of the dependent claims depend from one of independent claims 1, 2, 11-12, or 15-16 and are patentable over the cited prior art for at least the same reasons as set forth above with respect to claims 1, 2, 11-12, and 15-16. In addition, each of the dependent claims also recites combinations that are separately patentable.

In view of the foregoing remarks, this claimed invention, as amended, is not rendered obvious in view of the prior art references cited against this application. Applicant therefore requests the entry of this response, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

In discussing the specification, claims, and drawings in this response, it is to be understood that Applicant in no way intends to limit the scope of the claims to any exemplary embodiments described in the specification and/or shown in the drawings. Rather, Applicant is entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

**Except** for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned patent agent at (202) 585-8316.

Respectfully submitted,

**NIXON PEABODY, LLP**

/Marc W. Butler, Reg. #50,219/  
Marc W. Butler  
Registration No. 50,219

**NIXON PEABODY LLP**  
CUSTOMER NO.: 22204  
401 9th Street, N.W., Suite 900  
Washington, DC 20004  
Tel: 202-585-8000  
Fax: 202-585-8080